Rajiv Gandhi University of Health Sciences, Karnataka

II Year M. Sc Medical Imaging Technology - 08-May-2025

Time: 3 Hours | Max. Marks: 80

INTERVENTIONAL RADIOLOGY TECHNIQUES
Q.P. CODE: 9546

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions | 08 X 10 = 80 Marks

1. Discuss the construction of Cathlab room and the accessories in the room.
2. Discuss the trolley setting and other equipments to perform an Angiography procedure.
3. Procedure done for Cartico – Cavernous Fistula (CCF).
4. Sheldinger technique.
5. Role of Radiographer in interventional procedure.
6. Write the various embolic agents used in cathlab.
7. Write the various types of catheter.
8. Explain the digital image processor.

II Year M. Sc Medical Imaging Technology - 13-May-2025

Time: 3 Hours | Max. Marks: 80

CARE OF PATIENTS IN DIAGNOSTIC RADIOLOGY
Q.P. CODE: 9547

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions | 08 X 10 = 80 Marks

1. Describe general abdominal preparation and the care of patient undergoing barium enema procedure.
2. Explain Principles of radiation protection.
3. Discuss about Care of patient on stretcher.
4. Instruction given before receiving the patient for various radiological procedure.
5. Discuss about modes of transmission of infection.
6. Sterilization of medical equipments.
7. Discuss in detail about how you will instruct and receive patient posted for femoral angiography. Add a note on aftercare.
8. Emergency equipment and drugs kept in radiology department.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year M. Sc Medical Imaging Technology - 15-May-2025

[Time: 3 Hours] [Max. Marks: 80]

Radiation Evaluation and Protection in Diagnostic Radiology
Q.P. CODE: 9548

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions 08 X 10 = 80 Marks

1. What are the consequence of ionization in the human cell?
2. Production of primary radiation
3. Write briefly about radiation dose specification.
4. Describe the use of ALARA concept to radiographers performance daily.
5. Discuss on somatic and genetic damage factor.
6. What are the radiation safety program?
7. Personal monitoring devices
8. Explain about beam limiting devices and their role in radiation dose reduction.

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II Year M. Sc Medical Imaging Technology - 28-Oct-2025

Time: 3 Hours Max. Marks: 80

ADVANCED TECHNIQUE AND INSTRUMENTATION OF MRI
Q.P. CODE: 9545

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions 08 X 10 = 80 Marks

1. Discuss in detail about the fat suppression sequence and its clinical application.
2. Explain physical principle and protocol for doing MR spectroscopy in brain.
3. Discuss on parallel acquisition methods.
4. Diffusion imaging
5. Protocol of whole body imaging
6. Signal to noise ratio
7. MR Enteroclysis
8. Name few MRI artifacts and explain about them

Rajiv Gandhi University of Health Sciences, Karnataka

II Year M. Sc Medical Imaging Technology Degree Examination - 30-Oct-2025

Time: 3 Hours Max. Marks: 80

INTERVENTIONAL RADIOLOGY TECHNIQUES
Q.P. CODE: 9546

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

Answer All The Questions 8 X 10 = 80 Marks

1. Explain embolic agents and embolization of intracranial tumors and vascular malformations
2. Write a note on role of radiographer in interventional procedure and preparation for a female patient for a procedure
3. Describe drainage procedures in radiology
4. Write a note on care and maintenance tests for angiographic equipment's
5. Describe Radio Frequency (RF) ablation and types
6. Differentiate between Percutaneous Trans Hepatic Cholangiography (PTC) and Percutaneous Transhepatic Biliary Drainage (PTBD)
7. Explain about angiographic catheter. Write a note on Seldinger technique
8. Write a note on emergency drugs used in radiology

II Year M. Sc Medical Imaging Technology - 04-Nov-2025

[Time: 3 Hours] [Max. Marks: 80]

Care of Patients in Diagnostic Radiology
Q.P. CODE: 9547

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions 08 X 10 = 80 Marks

1. Explain in detail care and safety for pediatric and geriatric patients during radiological procedure.
2. Patient care during cardiac arrest.
3. Standard principle of surgical asepsis.
4. Mummy wrap technique.
5. Universal precautions.
6. Informed consent.
7. Isolation techniques.
8. Crash carts.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year M. Sc Medical Imaging Technology - 06-Nov-2025

[Time: 3 Hours] [Max. Marks: 80]

Radiation Evaluation and Protection in Diagnostic Radiology

Q.P. CODE: 9548

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions 08 X 10 = 80 Marks

1. Discuss briefly radiation units and quantities. Add a note on cellular effects of irradiation.
2. Discuss in detail the biological effect of radiation during pregnancy.
3. Discuss briefly the radiation technical factors consideration during pediatric radiography.
4. Discuss briefly the working principles of gas filled radiation survey dosimeters.
5. Explain in detail the X-ray room designs and structural shielding.
6. Discuss in detail the technical protective considerations taken during mobile radiography.
7. Dose limits for occupational workers and public according to ICRP.
8. Beam limiting devices.

II Year M. Sc Medical Imaging Technology - 11-Nov-2025

[Time: 3 Hours] [Max. Marks: 80]

Nuclear Medicine Imaging Techniques

Q.P. CODE: 9549

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions 08 X 10 = 80 M

1. Briefly explain the production of radionuclides in detail.
2. Safe handling and transport of Radioactive materials.
3. SPECT instrumentation.
4. Bone scan imaging using Gamma camera.
5. Radionuclide generator
   Or
   Explain cardiac stress and rest test
6. Radioactivity and decay constant.
7. Annihilation and its implication in nuclear medicine.
8. ALARA concept in nuclear medicine.

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